REMARKS

Status of the Claims

Claims 1-11 are currently under examination. Claims 12-25 and 32-51 have been canceled without prejudice as drawn to non-elected inventions. Claims 26-31 were previously canceled.

Rejections Under 35 USC §102

The Action rejects claims 1-11 as anticipated by CN 1137030 ('030), taking the position that the '030 teaches compositions comprising keratin, metal ions and preservative components.

Applicants respectfully traverse the rejection in that the cited reference does not describe any composition containing a hydratable keratin or a keratin hydrogel as in independent claim 1 and dependent claims 2-11.

According to the translated abstract of the '030 reference, the compositions contain a mixture of amino acids that are prepared by hydrolyzing keratin or soybean meal in 30-40 % sulfuric acid at high temperature. This reaction hydrolyses the protein backbone resulting in individual amino acids or short peptides. The abstract refers to this product as an amino acid solution, further supporting the fact that the composition contains amino acids rather than a hydratable protein product or a hydrogel.

In contrast to the amino acid solution in the '030 reference, which is made by hydrolyzing the protein backbone (breaking the peptide bonds), the hydratable keratin of the claimed invention is made by oxidizing or reducing disulfide bonds, thus separating protein strands or intraprotein links and leaving the backbone peptide bonds essentially unbroken. (Specification page 9, lns 9-21) The intact protein filaments then form a polyelecrolyte that absorbs water and

forms a protein hydrogel, capable of increasing the water retention properties of a soil containing the composition as well as providing essential nutrients.

Attached hereto as Exhibit A is a declaration of George Gentry providing a side by side comparison of the moisture retaining qualities of a keratin hydrogel soil amendment as claimed and a keratin hydrolysate as described in the cited reference.

As shown in the attached declaration, a mere 1.1 ounces of the hydratable keratin absorbed 8 ounces of water and still had not reached its capacity. At essentially an 8 fold ratio of water to keratin hydrogel, no water flowed out of the sample cup. Also attached hereto as Exhibit B is the Material Safety Data Sheet for the hydrolyzed keratin used by Mr. Gentry and discussed in his declaration. The Examiner's attention is drawn to section 2. The specific gravity is 1.05 g/cc and the material is characterized as soluble. This material is thus clearly distinguished from the hydratable keratin hydrogel material, which was not even partially solubilized, but rather swelled and absorbed as much as 8 times its weight in water.

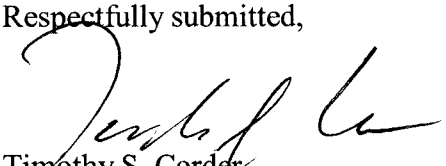
The '030 reference thus does not teach or suggest any such hydrogel forming composition, referring only to a hydrolyzed amino acid solution, and thus cannot anticipate any of the pending claims, or render any claim obvious. Applicants respectfully request, therefore, that the rejections of claims 1-11 over the '030 reference be withdrawn.

Conclusion

Based on the preceding comments, the claims are now in condition for allowance and an immediate notice to that effect is respectfully requested.

If the Examiner has any questions or suggestions that would help progress the claims to allowance, a telephone call to the undersigned is welcomed.

Respectfully submitted,



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